

REMARKS

This is in response to the Final Office Action mailed September 2, 2003. Claims 28, 29, 31, and 50 have been canceled, without prejudice or disclaimer. Claims 30, 32, 36, 39, and 51 have been amended. Claims 30, 32-39, and 51 are currently pending and at issue.

Claim 30 has been amended to depend from claim 33, and to specify the atmosphere "of step a)." Support for this amendment is found in the specification at, for example, page 7, lines 7-13.

Claim 32 has been amended to remove "chlorides" from the group of starting powders listed in step a) of this claim, and to recite that step b) occurs "under a humidified atmosphere." Support for this amendment is found in the specification at, for example, page 17, line 1-7.

Claim 36 has been amended to depend from claim 35, and to specify the atmosphere "of step b)." Support for this amendment is found in the specification at, for example, page 7, lines 7-13.

Claim 39 has been amended to remove "NaNO₃" from the group of non-reacting soluble additives listed in this claim.

Claim 51 has been amended to remove "chlorides" from the group of starting powders listed in step a) of this claim, and to recite that step b) occurs "under a humidified atmosphere." Support for this amendment is found in the specification at, for example, page 17, line 1-7.

No new matter has been added. Reconsideration of the present application is respectfully requested.

Rejection Under 35 U.S.C. § 112, First Paragraph

Claims 28-39, 50, and 51 have been rejected under 35 U.S.C. § 112, first paragraph as non-enabling. The Examiner states that a person of ordinary skill in the art would not be able to make and/or use the invention based on the present disclosure because the instant claims do not provide a source of oxygen for forming the perovskite structures "when starting powders in the form of chlorides are selected" (Final Office Action, p. 2).

Independent claims 28 and 50 have been canceled, without prejudice. Therefore, this rejection is considered moot with respect to claims 28 and 50 and all of their dependent claims.

Independent claims 32 and 51 have been amended to remove "chlorides" from the group of starting powders listed in step a) of this claim. Therefore, this rejection should be withdrawn with respect to claims 32 and 51 and all of their dependent claims.

Rejections Under 35 U.S.C. § 103(a)

Claims 28-39, 50, and 51 have been rejected under 35 U.S.C. § 103(a) as obvious over each of the following references: Kosova et al., Inorganic Materials, Vol. 34, No. 4, 1998, pp. 385-390 ("Kosova"); Baek et al., Materials Science Forum Vols. 235-238 (1997) pp. 115-120 ("Baek"); Wan et al., Acta Materialia (1999), 47(7), 2283-2291 ("Wan"); Xue et al., Materials Letters (1999), 39(6), 364-369 ("Xue"); Wang et al., Journal of the American Ceramic Society (1999),

82(5), 1358-1360 ("Wang 82(5)"); Wang et al., Journal of the American Ceramic Society (1999), 82(2), 477-479 ("Wang 82(2)"); or Wang et al., Advanced Materials (1999), 11(3), 210-213 ("Wang 11(3)").

The Examiner contends that each of the above references suggests the presently claimed process of mechanosynthesizing metal oxides of the perovskite structure. The Examiner further states that it would have been obvious for a person of ordinary skill to have selected the overlapping portions of the ranges disclosed by the references.

The rejection is respectfully traversed, and reconsideration is requested.

Independent claims 28 and 50 have been canceled, without prejudice. Therefore, this rejection is considered moot with respect to claims 28 and 50 and all of their dependent claims.

Independent claims 32 and 51 each recite a step b) of increasing the BET specific surface area of the metal oxide obtained in step a) by subjecting it to further high energy milling under a humidified atmosphere. This post-treatment process (i.e., step b)) has a "positive influence on the increase of the specific surface area of the perovskite" (Specification: p. 17, lines 4-7). Table 1 on page 22 illustrates dramatic increase in BET specific surface area that can be achieved by further high energy milling under a humidified atmosphere. For example, sample 3, which was prepared by normal milling for 20 hours at 200°C, had a BET surface area of 10.2 m²/g. In contrast, sample 4, which was prepared by 24 hours of normal milling and 6 hours of post-treatment milling under a humidified atmosphere, had a BET specific surface area of 35.9 m²/g — more than three times

the surface area of sample 3. The BET specific surface area of 35.9 m²/g in sample 4 is "one of the highest values reached in the art" (Specification: p. 17, lines 1-3, and p. 22, Table 1).

None of the cited references teaches or suggests the step of increasing the BET specific surface area by further high energy milling under humidified atmosphere. Therefore, none of the cited references, whether taken alone or in combination, can be relied upon to reject claims 30, 32-39, and 51 as obvious. Accordingly, this rejection should be withdrawn.

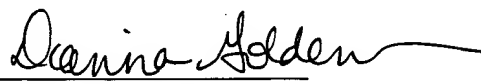
Conclusion

In view of the above amendments and remarks, it is respectfully requested that the application be reconsidered and that all pending claims be allowed and the case passed to issue.

If there are any other issues remaining, which the Examiner believes could be resolved through either a Supplemental Response or an Examiner's Amendment, the Examiner is respectfully requested to contact the undersigned at the telephone number indicated below.

Respectfully submitted,

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By: 
Dianna Goldenson
Reg. No. 52,949
Attorney for Applicants

Darby & Darby P.C.
Post Office Box 5257
New York, NY 10150-5257
212-527-7700